NARRATIVE SUMMARY

On October 21, 2017 Saturday morning at 1230 AM, Parkersburg fire crews responded to a fire at the Intercontinental Export and Import Company - Plant #1 on Camden Avenue in Parkersburg West Virginia. The facility is a warehouse housing many plastics-related and other unknown materials. The county had the lead in the incident command, and hired an environmental contractor (CTEH) to conduct air monitoring and sampling. CTEH and West Virginia Department of Environmental Protection (WV DEP)'s Homeland Security and Emergency Response collected roving realtime air monitoring for particulate matter and field air monitoring data for other constituents including carbon monoxide, chlorine, and sulfur dioxide. At the request of WV DEP, in addition EPA deployed four particulate air monitors around the perimeter of the fire, and began collecting data on October 22, 2017 (Sunday). ATSDR R3, ATSDR R5, and DTHHS ERS coordinated with EPA, WV state and local health, and OH state and local health. The Ohio EPA collected summa canister samples on October 23, 2017. The U.S. EPA collected summa canister samples on October 26, 2017. Air quality was impacted in both WV and across the river in OH.

On October 27, 2017, ATSDR sent an analysis of the particulate matter data to federal, state and local officials that had been received to date. On October 31, 2017, ATSDR sent a public health update on the available particulate matter air quality information to federal, state and local officials in West Virginia and Ohio.

Current Status

The fire was declared extinguished on October 29, 2017. ATSDR received preliminary air sampling data from CTEH on October 30, 2017. Summa air sampling data from EPA and Ohio EPA was received on November 6, 2017. Also, ATSDR received an inventory list from the property owner on November 8, 2017.

DISCUSSION

ATSDR has reviewed the air sampling data collected by CTEH, EPA, and Ohio EPA. Overall, the available air sampling data did not show levels of chemicals in the air that would cause acute health effects. There were a few detections of chemicals above

Acrylonitrile ranged from 0.1 to 0.16 ppb in the Ohio EPA Lowes Parking Lot and John St samples which are elevated above the Cancer Risk Evaluation Guide (CREG) for lifetime cancer risk of 0.01 ppb but are below the chronic reference concentration (Rfc) of 0.9 ppb. ATSDR estimates that continuously breathing air containing 0.1 ppb would result in not greater than a one-in-a-hundred thousand increased chance of developing cancer over a lifetime.

Benzene is slightly elevated above the chronic minimal risk level (MRL) of 3 ppb at sample location AA-01 (3.6 ppb). Detected levels of benzene are also slightly above the lifetime CREG of 0.04 ppb at all the sample locations but less than acute and chronic MRLs. Detected concentrations of benzene in the CTEH samples ranged from 0.85 – 2.2 ppb which are slightly above the CREG of 0.04 ppb but are less than ATSDR MRLs. ATSDR estimates that continuously breathing air containing 4 ppb would result in not greater than a one-in-a-ten thousand increased chance of developing cancer over a lifetime.

Carbon tetrachloride (0.11 – 0.3 ppb) is above the lifetime CREG of 0.03 ppb at AA-01, AA-05, and the John St locations but is less than the intermediate and chronic MRLs of 30 and 16 ppb, respectively. ATSDR estimates that continuously breathing air containing 0.3 ppb would result in not greater than a one-in-a-hundred thousand increased chance of developing cancer over a lifetime.

Chlorobenzene showed detections ranging from 1.5 – 32.3 ug/m^3 There are no standard comparison values for chlorobenzene. During the Deepwater Horizon response in 2010, ATSDR developed an incident specific comparison value of 1.5 ug/m3. That chlorobenzene comparison value was based on an animal study reported in a 2008 IUCLID report with health effects observed at 1.5 mg/m^3. The two highest detections of chlorobenzene exceeded this 1.5 ug/m3 level, and were detected at theh AA-01 and AA-05 locations. The levels are roughly 2 orders of magnitude less than the concentration known to cause health effects in animals.
Sample location AA-01 in the EPA samples represents the monitoring station closest to the site. Concentrations of the compounds listed above were highest at this monitoring station, which would be expected.

Sample location AA-05 was selected to represent background air quality not effected by the fire. If this is accurate, it can be assumed that background levels of benzene are 1 ppb, carbon tetrachloride 0.2 ppb, and chlorobenzene 0.3 ppb based on the sample results.

Limitations

Comprehensive information about the actual contents of the warehouse is lacking. For example, an outfall sample detected numerous pesticides in surface water runoff from the site, but pesticides were not included in the warehouse inventory information received to date. Air samples were first collected for chemical analysis starting several days after the fire started burning. Air flow during the event was complex, and the analytical samples collected represent snapshots of air quality at ground level from limited locations near the site. Therefore, we do not fully understand the mixtures of chemicals that were subsequently released to the air during the fire.

Community Concerns:

- Particulate matter and debris from the fire are the primary concern at this point. Any pervious materials such as clothing and hats that were outside during this event should be laundered prior to wearing.

- Within the home, wipe down any horizontal surfaces that could have been affected by the smoke and particulate matter from the fire with water and/or soap.

- The vegetables and fruits from outdoors should be considered safe to eat after washing them thoroughly as you would normally.

- Community members still experiencing respiratory symptoms should talk to their health care providers.

CONCLUSION

Smoke from any fire irritates the lungs, nose, and throat. Odors can also cause some additional health effects such as nausea, cough, headaches, and nasal congestion. The analysis of the limited analytical air data received by ATSDR to date indicates that the chemicals detected in the air during the fire at the locations sampled are not likely to cause health effects other than the symptoms noted above. Since the fire has been extinguished, symptoms related to this fire should not be experienced or observed at this time. However, as noted in the limitation section above, there is still and will likely remain significant uncertainty about the types and levels of chemicals that were in the air while the fire was burning.

RECOMMENDATIONS

- ATSDR will continue to review any additional environmental data as requested by federal, state, or local officials at the scene or during recovery operations. ATSDR will continue to coordinate our reviews with Federal, state, and local public health and environmental authorities.
- ATSDR recommends that samples of the ash be collected to determine chemical composition.
- ATSDR supports efforts of local and state health authorities to further evaluate the health concerns of first responders.